CLAIMS

1. An optoelectronic module, including:

- an optical radiation source (T) having associated an output transmission path (V1, V2, C1) for an output optical radiation generated by said source (T),

- an optical radiation detector (R) having associated an input transmission path (C2, V3, V4) for an input optical radiation to be detected by said detector (R),

characterised in that the module includes, as an integral part thereof, a loop-back arrangement (M1, M2; M12; VOA; OW) selectively activatable to cause said output optical radiation generated by said source (T) to at least partly propagate from said output transmission path (V1) towards said input transmission path (V4), whereby said optical radiation generated by said source (T) is directed towards said optical detector (R) to be detected thereby.

2. The module of claim 1, characterised in that said loop-back arrangement includes at least one loop-back element (M1, M2; M12) adapted to have a surface reflectively interposed in at least one of said output transmission path (V1, V2) and said input transmission path (V3, V4) to reflect optical radiation generated by said source (T) towards said optical detector (R).

3. The module of claim 2, characterised in that said at least one loop-back element includes a mirror (M1, M2; M12) having a reflective surface adapted to be selectively moved between a first position, wherein said reflective surface is located away from said at least one of said output transmission path (V1, V2) and said input transmission path (V3, V4) and a second position wherein said reflective surface intercepts at

least one of said output transmission path (V1, V2) and said input transmission path (V3, V4).

4. The module of claim 2, characterised in that said at least one loop-back element includes a stationary mirror (M1, M2; M12) selectively switchable between a first condition, wherein said mirror (M1, M2; M12) is substantially transparent to optical radiation propagating therethrough and a second condition, wherein said mirror exhibits said surface reflectively interposed in at least one of said output transmission path (V1, V2) and said input transmission path (V3, V4).

5. The module of any claims 2 to 4, characterised in that said loop-back arrangement includes first (M1) and second (M2) loop-back elements, said first loop-back element (M1) adapted to have a first surface reflectively interposed in said output transmission path (V1, V2) to reflect optical radiation generated by said source (T) towards said second loop-back element (M2); said second loop-back element (M) adapted to have a second surface for reflectively receiving said optical radiation reflected by said first loop-back element (M1) and direct said reflected radiation towards said optical detector (R).

6. The module of any of the previous claims, characterised in that said loop-back arrangement includes an optical attenuator (VOA) arranged to be traversed by optical radiation propagating from said source (T) towards said optical detector (R).

7. The module of claims 5 and 6, characterised in that said optical attenuator (VOA) is interposed between said first (M1) and second (M2) loop-back elements.

8. The module of claim 6, characterised in that said optical attenuator (VOA) is a variable optical

attenuator adapted to be selectively switched between a first, high loss condition, wherein said variable optical attenuator (VOA) substantially prevents propagation of optical radiation from said source (T) towards said detector (R) and a second, low loss condition, wherein said variable optical attenuator (VOA) permits propagation of optical radiation from said source (T) towards said detector (R).

9. The module of claims 7 and 8, characterised in that said first (M1) and second (M2) loop-back elements are mirrors having a high straight through coupling/reflection ratio.

10. The module of claim 5 and claim 6, characterised in that said optical attenuator (VOA) is a variable optical attenuator interposed between said source (T) and said first loop-back element (M1).

11. The module of any of claims 2 to 6, characterised in that said optical radiation source (T) and said optical radiation detector (R) are arranged so that said output transmission path (V1, V2) and said input radiation path (V3, V4) intersect at a point of intersection and in that a single loop-back element (M12) is provided adapted to have said surface reflectively located substantially at said point of intersection.

12. The module of claim 6 and claim 11, characterised in that said variable optical attenuator (VOA) is interposed between said optical source (T) and said single loop-back element (M12).

13. The module of any of the previous claims, characterised in that said optical radiation source (T) has associated an optical isolator (IS) arranged at the upstream end of said loop-back arrangement.

14. The module of any of the previous claims, characterised in that said loop-back arrangement is in the form of a planar lightwave circuit (PLC).